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METHOD DEMONSTRATION ANALYSIS
for
A Home Industries Project

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Demonstration

MAKING AN EVAPORATOR COOLER

(Formerly called "Iceless Refrigerator")

GREATEST EFFICIENCY OBTAINED WHEN USED UNDER DRY ATMOSPHERIC CONDITIONS.

Operations:
A. Making the wooden frame
B. Applying the wood finish
C. Covering with screen wire
D. Making the water pans
E. Making the cloth cover
F. Attaching the cover
G. Placing the drip pan
H. Adding water to the upper water pan

Operations	Important steps	Key points
A	1. Cut all pieces according to dimensions given in working drawings.	Choose well-seasoned, decay-resistant, and mildly odored wood. (Suitable woods of the Pacific area are teak, ash, maple, birch, sal, molave, dungon.)
Making	2. Make all mortises, grooves, etc.	Keep work well squared up and all pieces for opposite ends matched.
the	3. Construct the end pieces.	Make well-fitted joints.
Wooden	4. Attach the shelf braces.	Be sure that the shelf braces match on each end.
Frame	5. Attach the two top and the two bottom stretchers.	Lay one end down on a flat surface, attach stretchers, then attach other end before standing the frame.

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Operations	Important steps	Key points
A (Continued)	6. Fasten the tray shelf in place.	
	7. Make the doorframe.	Make strong joints at corners-brace if necessary.
	8. Make the shelves or shelf frames	Must be open to give good circulation. (Use slats or galvanized hardware cloth)
	9. Attach hinges to door and frame--also the fastener that holds the door closed.	Make sure that the doorframe is well fitted--use non rusting hinges.
B Applying the Wood Finish (If needed or desirable)	Apply a waterproof finish such as: 1. Two coats of flat paint and/or one coat of enamel. 2. Hot linseed oil or 3. Hot paraffin wax	Apply wood finish before screen wire is attached.
	For hot paraffin wax treatment: a. Warm the wood b. Applying boiling hot paraffin c. Rub with warm cloth d. Apply second coat of wax	 Near open fire or stove. Use cotton cloth mop. Remove all surplus wax Rub thoroughly
C Covering with Screen Wire	1. Attach window-screen wire to the back, the ends, and the doorframe, applying thin moulding at edges.	Rustproof wire is preferable. Other wire used should be painted.
	2. Unless the shelves are made of slats use 1/4 inch hardware cloth to cover shelf frames.	Stretch wire very tightly and tack securely.
D Making the Upper Water Pan and Bottom Drip Pan	1. Make the upper pan to fit inside the frame and to rest on the top shelf.	Use rustproof metal if possible. If it cannot be obtained, then use metal paint on the pans.
	2. Make the bottom pan about 2 inches wider than the outside dimensions of the frame.	

Operations	Important steps	Key points
E Making the Cloth Cover	1. Make a cover of cloth to fit the frame. It should be long enough to extend into the bottom drip pan. Canton flannel, burlap, or duck is suitable material.	If canton flannel is used turn the smooth side out. Absorbent material carries the water by capillary attraction best.
	2. Hem all the edges. Make eyelets in the material, or fasten loops on the edges which are to be fastened to the frame.	
	3. Make double wick strips which will reach across the top pan lengthwise and extend out over the cover on each end of the cooler.	These pieces or wicks serve to carry the water out of the pan into the cloth cover.
	4. Then make similar piece to extend across the pan in the other direction and to the corner.	
F Attaching the Cover	1. Attach the cover around the frame and down the side on which the door is not hinged, also down the hinge side of the frame.	Snaps or other fasteners which permit the cover to be easily removed are best.
	2. Then fasten on the latch side of the door.	Let about an inch extend over the open edge of the door.
	3. On the front side of the frame fasten the cloth to the top of the door instead of the frame.	This facilitates the opening of the door.
	4. Lay the wicks in the upper pan, letting them extend over the edge far enough to touch the cover.	Dampen the cover to speed the capillary movement of the water.
G Drip Pan	1. Stand the frame in the drip pan.	The cloth cover falls inside the drip pan.
H Adding the Water to the Upper Pan	1. Fill the upper pan within 1 inch of the top.	If the wicks are inclined to float out of place, weigh them down. Keep the upper pan filled with water.